

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A braking system for a vehicle, comprising:

a braking device for braking a vehicle;

an operating device which includes an operating member that is operated by a driver of the vehicle in a braking force increasing direction that is an operating direction in which a braking force of the braking device is increased, or in a braking force decreasing direction that is an operating direction in which the braking force of the braking device is decreased; and

a control device that decides a target control value for controlling the braking device based on an operation state amount and an operation state of the operating member and that controls the braking device based on the decided target control value,

wherein the control device includes an operating direction-dependant target control value deciding portion that determines a relationship between the operation state amount and the target control value based on the operation state of the operating member and uses the determined relationship to set at least one of:

an increasing direction target control value that is the target control value when the operating member is operated in the braking force increasing direction, and

a decreasing direction target control value that is the target control value when the operating member is operated in the braking force decreasing direction with the increasing direction target control value and the decreasing direction target control value being different from each other even when the operating member is at a same operation state at least in part of a control range.

2. (Original) The braking system for a vehicle according to claim 1, wherein the operating direction-dependant target control value deciding portion sets the decreasing direction target control value to a value lower than the increasing direction target control value.

3. (Original) The braking system for a vehicle according to claim 2, wherein the operating direction-dependant target control value deciding portion sets the decreasing direction target control value to a value lower than the increasing direction target control value in a low braking force control range where the braking force of the braking device is low.

4. (Original) The braking system for a vehicle according to claim 1, wherein the operating direction-dependant target control value deciding portion sets the decreasing direction target control value to a value higher than the increasing direction target control value.

5. (Original) The braking system for a vehicle according to claim 4, wherein the operating direction-dependant target control value deciding portion sets the decreasing direction target control value to a value higher than the increasing direction target control value in a high braking force control range where the braking force of the braking device is high.

6. (Original) The braking system for a vehicle according to claim 1, wherein the operating direction-dependant target control value deciding portion sets the decreasing direction target control value to a value lower than the increasing direction target control value in a low braking force control range where the braking force of the braking device is low, and also sets the decreasing direction target control value to a value higher than the increasing direction target control value in a high braking force control range where the braking force of the braking device is high.

7. (Original) The braking system for a vehicle according to claim 1, wherein the operating direction-dependant target control value deciding portion includes a target control value correcting portion which performs correction so as to suppress a rapid change in the target control value due to a control value difference between the increasing direction target control value and the decreasing direction target control value, when there is the difference at the time of switching the operating direction of the operating member.

8. (Original) The braking system for a vehicle according to claim 7, wherein the target control value correcting portion includes a target control value maintaining/correcting portion which maintains the target control value immediately before switching the operating direction until the control value difference disappears after switching the operating direction of the operating member.

9. (Original) The braking system for a vehicle according to claim 7, wherein the target control value correcting portion includes a control value difference gradual decrease correcting portion which performs correction based on a value for gradually decreasing the control value difference at the time of switching the operating direction at a predetermined rate, in an operation range of the operating member, which is set after switching the operating direction.

10. (Original) The braking system for a vehicle according to claim 1, wherein the control device decides a target vehicle deceleration as the target control value, and controls the braking device based on the target vehicle deceleration.

11. (Original) The braking system for a vehicle according to claim 1, wherein the control device decides the target control value based on at least an operation amount of the operating member, as the operation state amount.

12. (Original) The braking system for a vehicle according to claim 1, wherein the control device decides the target control value based on at least an operating force related amount of the operating member, as the operation state amount.

13. (Original) The braking system for a vehicle according to claim 12, wherein the operating device includes a cylinder device having a cylinder in which liquid is provided and a piston which applies pressure to the liquid in accordance with the operating member, and the control device decides the target control value based on at least a pressure of the liquid as the operating force related amount.

14. (Original) The braking system for a vehicle according to claim 13, wherein the operating device includes a stroke simulator which generates an operation amount corresponding to the operating force of the operating member in accordance with the cylinder device.

15. (Original) The braking system for a vehicle according to claim 1, wherein the braking device includes a friction braking device.

16. (Original) The braking system for a vehicle according to claim 15, wherein the friction braking device is a hydraulic friction braking device.

17. (Original) The braking system for a vehicle according to claim 15, wherein the friction braking device includes a rotator which rotates integrally with a wheel, a friction sliding member which generates a frictional force by sliding with the rotator, a friction sliding member holding device which holds the friction sliding member such that the friction sliding member can come close to or move away from the rotator, and a friction sliding member pressing device which presses the friction sliding member to the rotator.

18. (Original) The braking system for a vehicle according to claim 17, wherein the friction braking device is a hydraulic friction braking device, and the friction sliding member pressing device includes a pressing cylinder device which has a piston and a cylinder

in which an operating fluid is provided, and which presses the friction sliding member to the rotator using a pressure of the operating fluid.

19. (Currently Amended) A braking system for a vehicle, comprising:

a braking device for braking a vehicle;

an operating device that includes an operating member that is operated by a driver of the vehicle in a braking force increasing direction that is an operating direction in which a braking force of the braking device is increased, or in a braking force decreasing direction that is an operating direction in which the braking force of the braking device is decreased; and

a control device that decides a target control value for controlling the braking device based on an operation state amount of the operating member and that controls the braking device based on the decided target control value,

wherein:

the control device includes an operating direction-dependant target control value deciding portion that sets, based on a first predetermined relationship between an increasing direction target control value and the operation state amount of the operating member, the increasing direction target control value that is the target control value when the operating member is operated in the braking force increasing direction, and sets, based on a second predetermined relationship between a decreasing direction target control value and the operation state amount of the operating member, the decreasing direction target control value that is the target control value when the operating member is operated in the braking force decreasing direction with the increasing direction target control value and the decreasing direction target control value being different from each other even when the operating member is at a same operation state at least in part of a control range, and

the first predetermined relationship is different than the second predetermined relationship.

20. (Currently Amended) A method for braking a vehicle using a braking device for braking a vehicle, the method comprising:

determining a state of an operating device that includes an operating member that is operated by a driver of the vehicle in a braking force increasing direction that is an operating direction in which a braking force of the braking device is increased, or in a braking force decreasing direction that is an operating direction in which the braking force of the braking device is decreased;

determining an operating state amount of the operating member;

determining, based on the determined state of the operating device, a target control value for controlling the braking device based on an operation state amount of the operating member and that controls the braking device based on the decided target control value, and

wherein:

if it is determined that the operating device is in a braking force increasing state, the step of determining a target control value comprises using a first predetermined relationship between an increasing direction target control value and the determined operation state amount of the operating member, to determine an increasing direction target control value that is the target control value when the operating member is operated in the braking force increasing state, and

if it is determined that the operating device is in a braking force decreasing state, the step of determining a target control value comprises using a second predetermined relationship between a decreasing direction target control value and the determined operation state amount of the operating member, to determine a decreasing direction target control

value that is the target control value when the operating member is operated in the braking force decreasing state, and

the first predetermined relationship is different than the second predetermined relationship even when the operating member is at a same operation state.